

Riparian Vegetation Management Task Force

Vegetative Management and Treatment Work Group

Long-Term Vegetative Control and Management Research Needs and Recommended Implementation Strategy

Background and Research Needs

LB 701 tasks the Riparian Vegetation management Task Force with developing and prioritizing vegetation management goals and objectives, analyzing the cost effectiveness of available vegetative treatment, and developing plans and policies to achieve goals and objectives. The Task Force has established working groups to address various aspects of these LB701 requirements. The Vegetative Management and Treatment Work Group (Work Group) is one of those groups and has been tasked with completing these actions:

1. Recommending proactive management and control strategies using the adaptive management approach that utilizes the best techniques currently available.
2. Estimating cost for initial and follow-up vegetation control, removal and management.
3. Analyzing cost effectiveness of control, removal, and management options.
4. Developing templates and protocols for control, revegetation and rehabilitation, monitoring and/or long-term management, and maintenance.

The Work Group has reviewed currently available management and control strategies and has identified typical cost ranges for those strategies. However, the Work Group feels that insufficient data is available to make recommendations on long-term management strategies or to assess long-term cost-effectiveness, especially in regard to common reed (*Phragmites spp*) control. Given the apparent absence of data needed to make these recommendations, the Work Group has developed an integrated weed management applied research project and implementation strategy for Task Force consideration.

Research Objectives and Components

The Work Group has identified the need for a long-term (minimum three year) statewide applied research and demonstration effort focused on integrating a variety of existing mechanical, biological and herbicide vegetation control methods. The results of this study would be used to develop long-term “Best Management Practices” for future control efforts in the state and would facilitate identification of the most cost-effective long-term control strategies.

The Work Group recommends that applied research and demonstrations be conducted at several locations, including sites along the Platte, Republican and Niobrara rivers during 2008, 2009 and 2010. The study design would include evaluation of combinations of integrated weed control

methods including disking, mowing, grazing and herbicide application at each site. The long-term efficacy of the various combinations of control methods would be determined through a coordinated yearly monitoring and data collection program. The study design would include yearly reapplications of the various management treatments as necessary in order to assess cost-effectiveness of vegetation control.

Implementation strategy for the project

The Work Group foresees a number of challenges to implementing a long-term statewide riparian vegetation management applied research effort given the nature and disposition of LB 701 funds. Those challenges include:

- Grant application process – LB 701 grants are typically geographically oriented and grants do not have standardized research or monitoring requirements
- Applicant requirements - Research oriented entities like universities cannot submit grant applications
- Project funding – LB 701 funds must be used prior to July 1, 2009

Given these challenges and constraints, a subgroup to the Work Group discussed various research coordination and implementation strategies. The consensus conclusion of the subgroup was that although more challenging to implement, a single statewide research effort would be vital in establishing a cohesive research design, standardizing data collection and facilitating evaluation. The subgroup then developed a three year applied research framework/proposal in cooperation with Dr. Steven Knezevic (integrated weed management specialist and associate professor with the University of Nebraska Lincoln) to present to the full Work Group. The Work Group has reviewed this strategy and proposal and recommends it to the Task Force for implementation. The full applied research and demonstration proposal is included as an attachment to this document.

This strategy would entail the use of a University of Nebraska Lincoln (UNL) research associate or Post Doctorate as the statewide research project coordinator. The coordinator would be responsible for general project oversight, data collection, and reporting while working closely with Dr. Knezevic. Entities receiving LB 701 funds would be responsible for working with the project coordinator to identify potential research sites, executing landowner agreements, and application of the prescribed treatments. In order to encourage a collaborative research effort, the Work Group recommends that the Task Force require that all grant recipients participate in the project as a condition of grant funding.

The cost of this research project (not including treatments) would be around \$60,000 per year (see attached document). The Work Group recommends that the Task Force fund at least a portion of the first year research utilizing LB 701 funds. If year two and three funds were not available through LB 701, the Work Group participants would pursue other funding sources to complete the research project. A portion of the grant funds could potentially be distributed to

each of the grant recipients, or a qualifying entity could submit a single grant for the entire research effort. The Work Group recommends the later funding strategy, and would work with the Task Force to identify an entity that would be willing to submit the application. This entity would only be responsible for submitting the grant and coordinating financial arrangements with the University of Nebraska.

In addition to applied research and demonstration, the publication of research data along with development of an Extension publication and video regarding “Best Management Practices” to be used for public education and awareness would be suggested as a complimentary component of this project. Estimated cost of publication would be \$49,000.